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NEWS 3 CA/Capius records now contain indexing from 1907 to the present

NEWS 4 INPDOC: Legal Status data reloaded  
NEWS 5 DISABS now available on STN  
NEWS 6 OCT 10 PCTFUL: Two new display fields added  
NEWS 7 OCT 21 BIOSIS file reloaded and enhanced  
NEWS 8 NOV 24 MSDS-CCOHS file reloaded  
NEWS 9 NOV 24 CABA reloaded with left truncation  
NEWS 10 DEC 08 IMS file names changed  
NEWS 11 DEC 08 Experimental property data collected by CAS now available in REGISTRY  
NEWS 12 DEC 09

NEWS 13 DEC 09 STN Entry Date available for display in REGISTRY and CA/Capius  
NEWS 14 DEC 17 DCCMR: Two new display fields added  
NEWS 15 DEC 18 BIOTECNO no longer updated  
NEWS 16 DEC 19 CROPU no longer updated; subscriber discount no longer available  
NEWS 17 DEC 22 Additional INPI reactions and pre-1907 documents added to CAS databases  
NEWS 18 DEC 22 IFIPAT/IFIPUB/IFICDB reloaded with new data and search fields  
NEWS 19 DEC 22 ABI-INFORM now available on STN

NEWS EXPRESS DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.00b(JP).  
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003

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SINCE FILE ENTRY	TOTAL SESSION
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FULL ESTIMATED COST

0.21

0.21

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STRUCTURE FILE UPDATES: 6 JAN 2004 HIGHEST RN 634878-43-6  
DICTIONARY FILE UPDATES: 6 JAN 2004 HIGHEST RN 634878-43-6

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registrys.html>

=> s lipase  
L1 2987 LIPASE

=> s ruthenium  
L2 109832 RUTHENIUM

=> s l2 and complex  
806576 COMPLEX  
1189 COMPLEXES  
807706 COMPLEX

L3 30756 l2 AND COMPLEX (COMPLEX OR COMPLEXES)

=> file caplus COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
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FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 13:37:06 ON 08 JAN 2004  
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FILE COVERS 1907 - 8 Jan 2004 VOL 140 ISS 2  
FILE LAST UPDATED: 7 Jan 2004 (20040107/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

UPDATED  
STN SEARCH  
TRANSCRIPT  
- DON'T REMOVE  
09/17/86, 276

=> s 11 and 13  
40511 L1  
13647 L3  
31 L1 AND L3

=> s 14 and (RACEMI? OR RESOL?)  
39218 RACEMI?  
442012 RESOL?  
23 L4 AND (RACEMI? OR RESOL?)

=> d 1-23 1dib abs hitstr

L5 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2004 ACS ON STN  
ACCESSION NUMBER: 2003:417577 CAPLUS  
DOCUMENT NUMBER: 139:6672

TITLE: Process for the synthesis of (R)-1-(3,5-bis(trifluoromethyl)phenyl)ethan-1-ol and esters thereof by dynamic kinetic resolution

INVENTOR(S): Karel Maria Broxerman, Quirinus Bernardus, Verzijl, Gerardus

PATENT ASSIGNER(S): Merck & Co., Inc., USA  
SOURCE: PCT Int. Appl., 44 pp.  
CODEN: FIKXD2

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

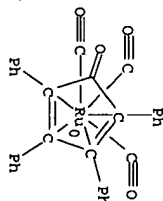
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003043575	A2	20030530	WO 2002-US36969	20021115
WO 2003043575	A3	20031016		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, ST, SV, SW, TH, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RM:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2001-333039P P 20011119  
OTHER SOURCE(S): CASREACT 139:6672; MARPAT 139:6672

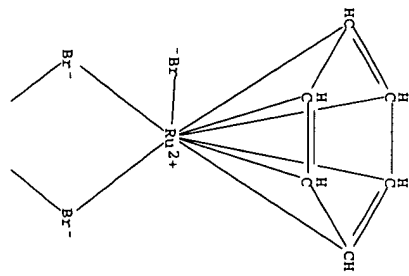
AB (R)-1-(3,5-bis(trifluoromethyl)phenyl)ethan-1-ol and esters thereof were obtained via dynamic kinetic resolu. These compds. are useful as intermediates in the synthesis of compds. which possess pharmacol. activity. Thus, 1,3-(F3C)2C6H4 was brominated and the resulting 3,5-(F3C)3C6H3Br subjected to Grignard reaction with Ac2O to give 3,5-(F3C)3C6H3COMe or with MeCHO to give 3,5-(F3C)3C6H3CHMeOH. 3,5-(F3C)3C6H3COMe was subjected to transfer hydrogenation in presence of [RuCl2(DP-cymene)]2 and (R,S)-H2NCPHCONH2 to give (R,S)-3,5-(F3C)3C6H3CHMeOH which was subjected to kinetic resolu. with CH2=OMeOAc in presence of Novozym435 to give (R)-3,5-(F3C)3C6H3CHMeOAc with 99% ee.

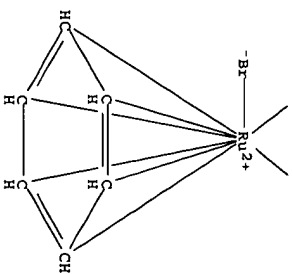
IT 9001-62-1, Novozym435 12321-08-3 37362-03-1  
37366-09-9, Benzenetruthenium dichloride dimer 37375-79-4  
52462-39-0, P-Cymenetruthenium dichloride dimer 52462-30-3  
52462-31-4 67421-02-7 88946-78-5  
88946-79-6 88946-80-9 104439-77-2  
123265-36-1  
Ru: Cat (Catalyst use); USES (Uses)  
(process for the synthesis of (R)-1-(3,5-bis(trifluoromethyl)phenyl)eth

an-1-ol and esters thereof by dynamic kinetic resolu.)  
RN 9001-62-1 CAPLUS  
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
RN 12321-08-3 CAPLUS  
CN Ruthenium, tricarbonyl[(2,3,4,5'-eta.)-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-one] - (9CI) (CA INDEX NAME)



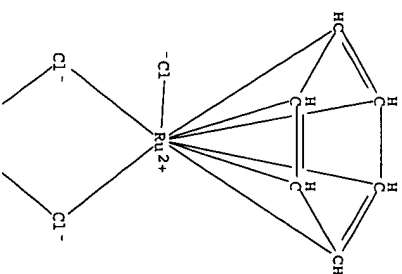
RN 37362-03-1 CAPLUS  
CN Ruthenium, bis(eta-6-benzene)di-mu-bromodipromodi- (9CI) (CA INDEX NAME)



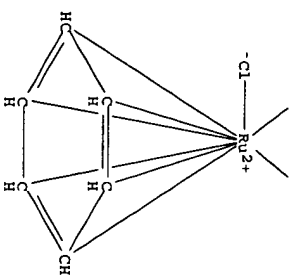


PAGE 2-A

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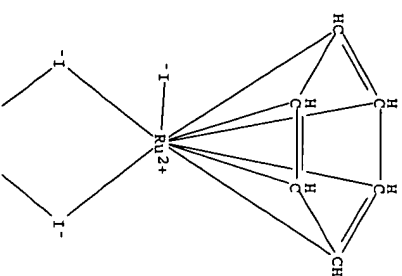


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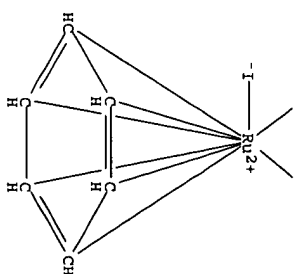


PAGE 2-A

RN 37375-79-4 CARPLUS  
CN Ruthenium, bis(eta.6-benzene)di-mu.-iododiodo- (9CI) (CA INDEX NAME)

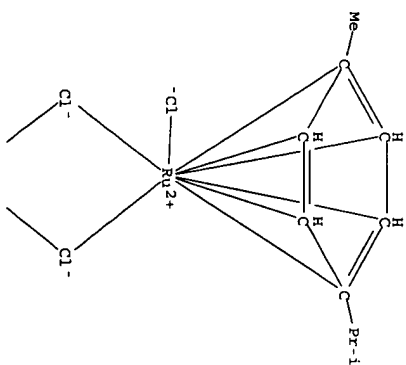


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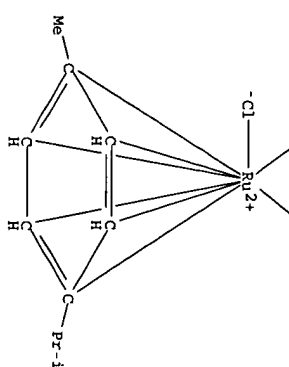


PAGE 2-A

RN 52462-29-0 CARBUS  
 CN Ruthenium, di- $\mu$ ,-chlorodichlorobis[(1,2,3,4,5,6- $\eta$ )-(1-methyl-4-(1-methylethyl)benzene)di-(9CI)] (CA INDEX NAME)

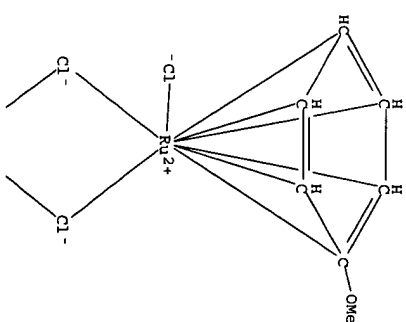


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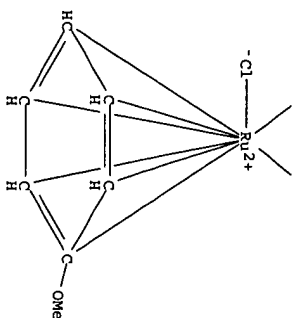


PAGE 2-A

RN 52462-30-3 CARBUS  
 CN Ruthenium, di- $\mu$ ,-chlorodichlorobis[(1,2,3,4,5,6- $\eta$ )-(methoxybenzene)di-(9CI)] (CA INDEX NAME)



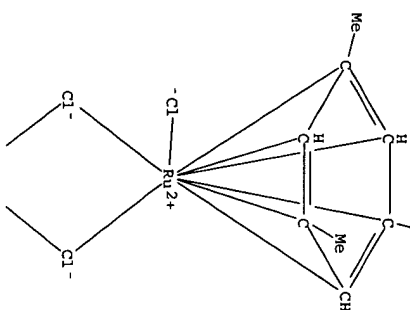
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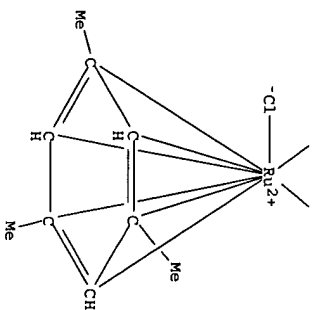
RN 52462-31-4 CAPLUS  
 CN Ruthenium, di- $\mu$ ,-chlorodichlorobis[(1,2,3,4,5,6- $\eta$ )-1,3,5-trimethylbenzene]di- (9CI) (CA INDEX NAME)

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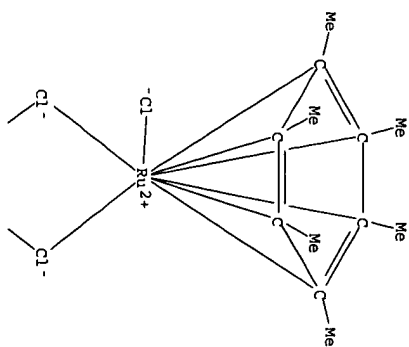
RN 67421-02-7 CAPLUS  
 CN Ruthenium, di- $\mu$ ,-chlorodichlorobis[(1,2,3,4,5,6- $\eta$ )-hexamethylbenzene]di- (9CI) (CA INDEX NAME)



PAGE 3-A

Me

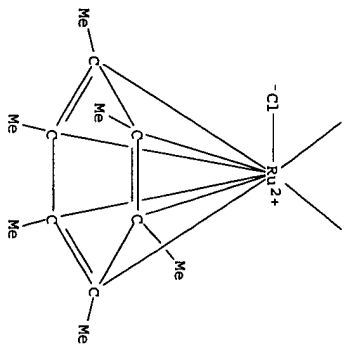
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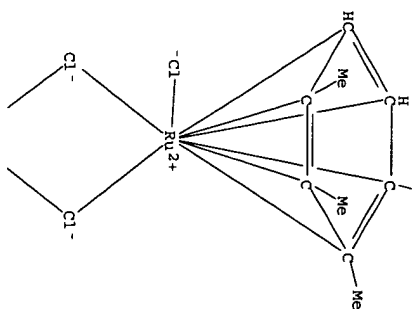
PAGE 1-A

Me

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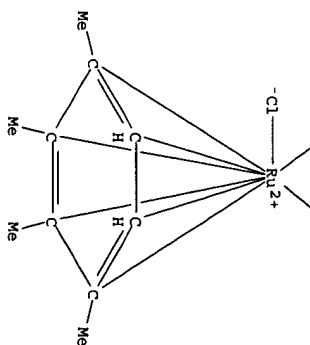


PAGE 2-A



RN 88946-78-5 CAPLUS  
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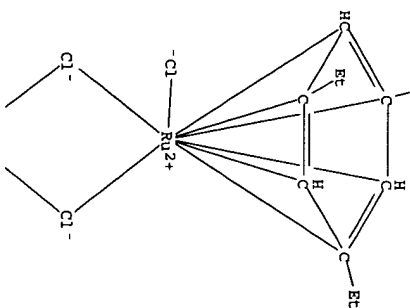
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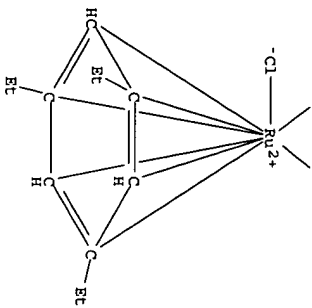
RN 88946-79-6 CAPUS  
 CN Ruthenium, di- $\mu$ ,-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1,3,5-trimethylbenzene]di- (9CI) (CA INDEX NAME)

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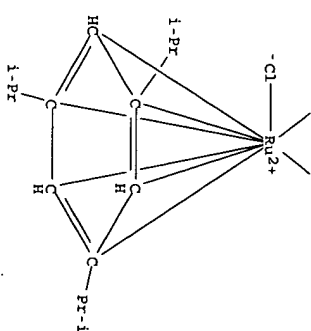
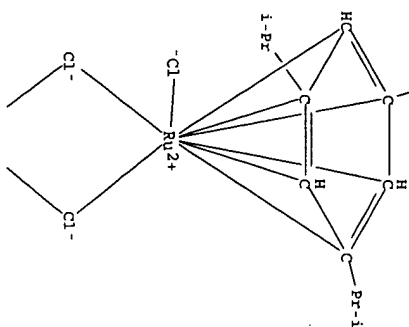
RN 88946-80-9 CAPUS  
 CN Ruthenium, di- $\mu$ ,-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1,3,5-tris(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



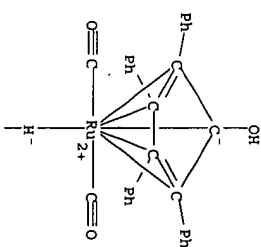
PAGE 3-A

Et

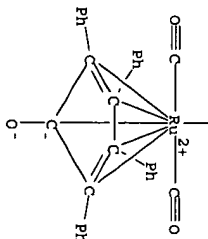
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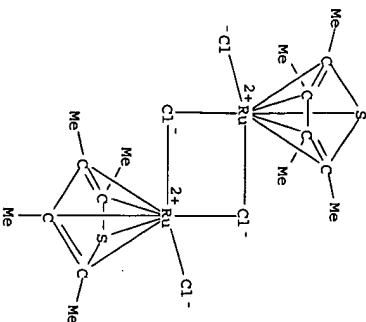
RN 104439-77-2 CAPILUS  
CN Ruthenium, tetracarbonyl- $\mu$ -hydro[(1,2,3,4,5- $\eta$ )-(1-hydroxy)ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl][(1,2,3,4,5- $\eta$ )-(1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl)]di- (9CI) (CA INDEX NAME)







RN 123265-36-1 CAPLUS  
CN Ruthenium, di- $\mu$ -(chlorodichlorobis(2,3,4,5- $\epsilon$ -tetramethylthiophene- $\kappa$ ppa,S)di-, stereoisomer (9CI) (CA INDEX NAME)



I5 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2003:273130 CAPLUS  
DOCUMENT NUMBER: 139:214151  
TITLE:

Asymmetric hydrogenation of an  $\alpha,\beta$ -unsaturated ketone by diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolution: a consecutive approach

Lindner, Ekkehard; Ghanem, Ashraf; Warad, Ismail; Eichele, Klaus; Mayer, Hermann A.; Schurig, Volker

Institute of Inorganic Chemistry, University of

Tübingen, Tübingen, 72076, Germany

Tetrahedron: Asymmetry (2003), 14(8), 1045-1053

CODEN: TASTES; ISSN: 0957-4166

Elsevier Science Ltd.

PUBLISHER: English

Journal

AB The RuCl<sub>2</sub>( $\epsilon$ -1-Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>(diamine) complexes have been prepd. in

high yields from the reaction of equimolar amts. of RuCl<sub>2</sub>( $\epsilon$ -2-Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub> with various kinds of chelating diamines to form five-membered chelates with ruthenium. These novel ruthenium(II)

complexes have been used as catalysts in the asym. hydrogenation of the prochiral ketone trans-4-phenyl-3-buten-2-one (I), using 2-propanol and different types of cocatalysts. Whereas complexes with achiral diamines afforded the racemic alcs., complexes with chiral diamines (R,R or S,S) allowed the formation of the corresponding enantiomerically enriched secondary alc. (S or R) with ee values of 45%. In order to obtain the secondary alc. with ee of >99%, the kinetic resolu. of enantiomerically enriched I was performed in a consecutive approach using either the lipase-catalyzed enantioselective transesterification of the alc. with isopropenyl acetate as the acyl donor in toluene or the enantioselective hydrolysis of the corresponding acetate in buffer. The detn. of the enantiomeric excess (ee) of the resulting enantiomerically enriched secondary alcs. was performed by gas chromatog. using heptakis(2,3-di-O-methyl-6-O-tert-butyl-2-methylsilyl)- $\beta$ -cyclodextrin as the chiral stationary phase.

IT 9001-62-1, Lipase

RU: Cat (Catalyst use) / USES (Uses)

(asym. hydrogenation of an  $\alpha,\beta$ -unsat. ketone by

diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolu.)

CN 9001-62-1 CAPLUS

lipase, triacylglycerol (9CI) (CA INDEX NAME)

IT 109011-62-3

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RU: RCT (Reactant) / RACT (Reactant or reagent)

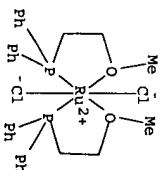
(asym. hydrogenation of an  $\alpha,\beta$ -unsat. ketone by

diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolu.)

CN 109011-62-3 CAPLUS

Ruthenium, dichlorobis(2-(methoxy- $\kappa$ ppa,O)ethyl)diphenylphosphine-

$\kappa$ ppa,P)-, (OC-6-13)-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 30

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I5 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:120380 CAPLUS

DOCUMENT NUMBER: 138:283203

TITLE:

On the Mechanism of the Unexpected Facile Formation of

meso-Diacetate Products in Enzymatic Acetylation of

Alkanediols

Edin, Michaela; Baeckvall, Jan-E.

Department of Organic Chemistry, Arrhenius Laboratory,

Stockholm University, Stockholm, SE-106 91, Swed.

Journal of Organic Chemistry (2003), 68(6), 2216-2222

CODEN: JOCEAH; ISSN: 0022-3263

American Chemical Society

Journal

English

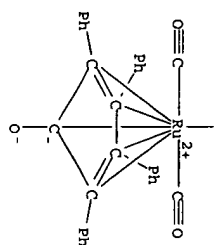
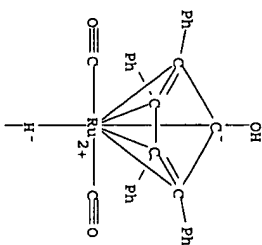
AB The mechanism of the unexpected facile formation of meso-diacetate

previously obsd. in the enzymic resolu. of DL/meso mixts. of

2,4-pentenediol and 2,5-hexanediol with Candida antarctica lipase B has been elucidated. It was found that the formation of meso-diacetate proceeds via different mechanisms for the two diols. Enzyme-catalyzed acylation of AcO-d3 labeled (R)-monoacetates of meso-2,4-pentenediol and meso-2,5-hexanediol and anal. of the meso-diacetates obtained show that the former reaction proceeds via intramol. acyl migration while the latter occurs via direct S-acylation of the alc. For the (R)-monoacetate of (R,S)-2,4-pentenediol the intramol. acyl migration was fast and therefore direct S-acylation by the external acyl donor is suppressed. For the hexanediol monoacetate the rate ratio (pseudo E value) between (5R,2R)- and (5R,2S)-5-acetoxy-2-hexanol was expl. detd. to be KR,R/KR,S = 25, which is about 10-20 times lower than the E value for 2-pentanol and 2-octanol. In a preliminary expt. it was demonstrated that facile acyl migration in the 1,3-diol deriv. can be utilized to prep. syn-1,3-diacetoxynonane (>90% syn) in high enantioselectivity (>99% ee) via a chemoenzymic dynamic kinetic asym. transformation of a meso/DL mixt. of 1,3-nonenediol.

IT 104439-77-2  
 RU: RCT (Reactant); RACT (Reactant or reagent)  
 (Candida antarctica lipase can form anti-Kazlauskas acetylation products of 2,4-pentenediol and 2,5-hexanediol)  
 PN 104439-77-2 CAPUS  
 CN Ruthenium, tetracarbonyl- $\mu$ -hydro[(1,2,3,4,5- $\eta$ )-1-hydroxyato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5- $\eta$ )-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

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IT 9001-62-1  
 RU: CAT (Catalyst use); USES (Uses)  
 (Lipase B: Candida antarctica lipase can form anti-Kazlauskas acetylation products of 2,4-pentenediol and 2,5-hexanediol)  
 PN 9001-62-1 CAPUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 REFERENCE COUNT: 20  
 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L5 ANSWER 4 OF 23 CAPUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:76732 CAPUS  
 DOCUMENT NUMBER: 138:137021  
 TITLE: Process for the racemization of secondary alcohols using ruthenium compounds and chelating agents  
 INVENTOR(S): Riemeler, Thomas; Gross, Peter; Hoff, Manfred; Monsees, Axel; Dingerdissen, Uwe  
 PATENT ASSIGNEE(S): Degussa AG, Germany  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003008361	A1	20030130	WO 2002-EP7743	20020711
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MY, NZ, NO, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, BG, BR, CA, CH, CN, CO, CR, CU, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BO, CF, CG, CI, CM, GA, GM, GQ, GW, ML, MR, NE, SN, TD, TG	AI	20030206	DE 2001-10133783 A 20010716

PRIORITY APPLN. INFO.:  
 DE 10133783 AI 20030206 DE 2001-10133783 A 20010716  
 OTHER SOURCE(S):  
 MARPAT 138:137021  
 AB A process for the racemization of secondary alcs. uses a mixt. of Ru precursor with a gtoresq.1 chelating N-donor ligands or a complex comprising Ru and a gtoresq.1 chelating N-donor ligand. Thus, di- $\mu$ -chlorobis[(p-cymene)chlororuthenium(II)] were heated in Phne at

80 degree. in a Schlenk tube for 5 h to give a product having 1% enantiomeric excess. The process was also carried out simultaneously with a kinetic enzymic resolu.

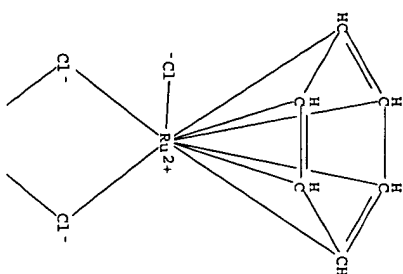
IT 9001-62-1, Chirazyme L-2  
 RU: CAT (Catalyst use); USES (Uses)  
 (dynamic kinetic resolu. of secondary alcs. using ruthenium compds. and chelating agents)

RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

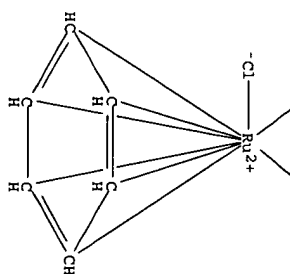
IT 37366-09-9 Benzeneruthenium(II) chloride dimer 52462-29-0  
 RU: CAT (Catalyst use); USES (Uses)  
 (process for the racemization of secondary alcs. using ruthenium compds. and chelating agents)

RN 37366-09-9 CAPLUS  
 CN Ruthenium, bis(.eta.6-benzene)di-.mu.-chlorodichlorodi- (9CI) (CA INDEX NAME)

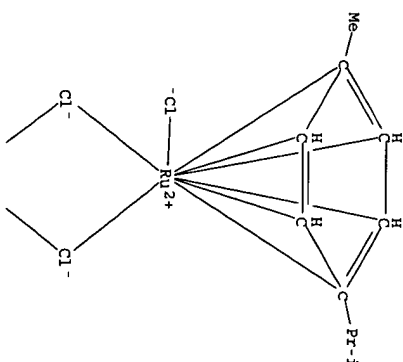


PAGE 1-A

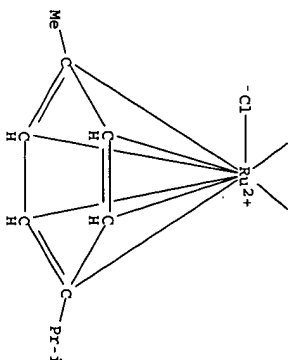
RN 52462-29-0 CAPLUS  
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



PAGE 2-A

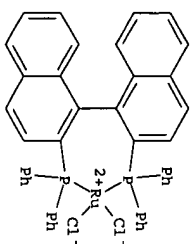


PAGE 1-A



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RN 134524-84-8 CAPLUS  
CN Ruthenium, [[1,1'-binaphthalene]-2,2'-diylbis(diphenylphosphine-  
.kappa.P)]dichloro-, [SP-4-2(S)1]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2004 ACS on STM  
ACCESSION NUMBER: 2002:880431 CAPLUS  
DOCUMENT NUMBER: 138:106546  
TITLE: Chemoenzymatic Dynamic Kinetic Resolution of  
.beta.-Halo Alcohols. An Efficient Route to Chiral  
Epoxides

AUTHOR(S): Pamies, Oscar; Baeckvall, Jan-E.  
CORPORATE SOURCE: Department of Organic Chemistry, Arrhenius Laboratory,  
Stockholm University, Stockholm, SE-10691, Swed.  
JOURNAL OF ORGANIC CHEMISTRY (2002), 67(125), 9006-9010  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 138:106546

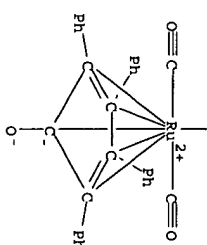
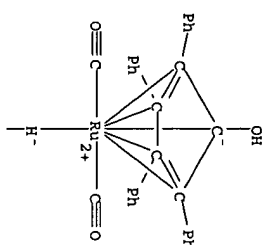
AB Enzymic resoln. of .beta.-chloro alcs. in combination with  
ruthenium-catalyzed alc. isomerization led to a successful dynamic kinetic  
resoln. (conversion up to 99% and ee up to 97%). The efficiency  
of the DKR is dramatically reduced when .beta.-bromo alcs. are used. The  
presence of the bromo substituent causes decompn. of the ruthenium  
catalysts, which triggers the progressive deactivation of the enzyme. The  
synthetic utility of this procedure has been illustrated by the practical  
synthesis of different chiral epoxides.

IT 9001-62-1, Lipase  
RL: CAT (Catalyst use); US93 (Uses)  
(pseudomonas sp.; chemoenzymic dynamic kinetic resoln. of  
.beta.-halo alcs. and subsequent conversion of intermediate acetates to  
chiral epoxides)  
RN 9001-62-1 CAPLUS  
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
IT 104439-77-2

RL: CAT (Catalyst use); US93 (Uses)  
(racemization catalyst; chemoenzymic dynamic kinetic  
resoln. of .beta.-halo alcs. and subsequent conversion of  
intermediate acetates to chiral epoxides)  
RN 104439-77-2 CAPLUS  
CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxyato-  
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-  
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

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REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

PAGE 1-A

L5 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2002:858574 CAPLUS  
DOCUMENT NUMBER: 138:271003  
TITLE: Efficient lipase-catalyzed kinetic resolution and dynamic kinetic resolution of .beta.-hydroxy nitriles. Correction of absolute configuration and transformation to chiral .beta.-hydroxy acids and .gamma.-amino alcohols

AUTHOR(S):  
CORPORATE SOURCE: Ramies, Oscar; Backvall, Jan-E. Department of Organic Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, 106 91, Swed. Advanced Synthesis & Catalysis (2002), 344(9), 947-952

SOURCE: CODEN: ASCAF7; ISSN: 1615-4150 Wiley-VCH Verlag GmbH & Co. KGaA

PUBLISHER: Journal

DOCUMENT TYPE: English

OTHER SOURCE(S): CASREACT 138:271003

AB Chemocatalytic dynamic kinetic resolu. of .beta.-hydroxy nitriles has been carried out using Candida antarctica lipase B and a ruthenium catalyst. The use of a hydrogen source to depress ketone formation in the dynamic kinetic resolu. yields the acetates in good yield and high enantioselectivity. It is shown that the ruthenium catalyst and the enzyme can be recycled when used in sep. reactions. Enantiomerically pure .beta.-hydroxy acid derivs. and .gamma.-amino alcs. were prepd. from the hydroxy nitriles and acetates. The latter compds. were also used to establish the correct abs. configuration of the hydroxy nitriles and acetates.

IT 9001-62-1

RU: CAT (Catalyst use); USES (Uses)  
(Lipase B: lipase-catalyzed kinetic resolu. and dynamic kinetic resolu. of .beta.-hydroxy nitriles and conversion to chiral .beta.-hydroxy acids and .gamma.-amino alcs.)

RN 9001-62-1 CAPLUS  
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 104439-77-2  
RU: CAT (Catalyst use); USES (Uses)  
(lipase-catalyzed kinetic resolu. and dynamic kinetic resolu. of .beta.-hydroxy nitriles and conversion to chiral .beta.-hydroxy acids and .gamma.-amino alcs.)

RN 104439-77-2 CAPLUS  
CN Ruthenium, tetracarboxyl-.mu.-hydro((1,2,3,4,5-.eta.)-1-hydroxy)ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 22

THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

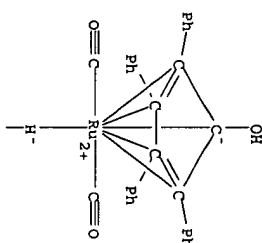
L5 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2002:456611 CAPLUS  
DOCUMENT NUMBER: 137:384594  
TITLE: An efficient and mild ruthenium-catalyzed racemization of amines: application to the synthesis of enantiomerically pure amines

AUTHOR(S):  
CORPORATE SOURCE: Ramies, Oscar; Eli, Alida H.; Samec, Joseph S. M.; Hermanns, Nina; Backvall, Jan-E. Arrhenius Laboratory, Department of Organic Chemistry, Stockholm University, Stockholm, SE-10691, Swed. Tetrahedron Letters (2002), 43(26), 4699-4702

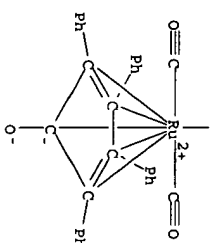
SOURCE: CODEN: TELEAY; ISSN: 0040-4039 Elsevier Science Ltd.

PUBLISHER: Journal

DOCUMENT TYPE: English  
LANGUAGE: AB An efficient and mild Ru-catalyzed racemization of amines under



PAGE 2-A



transfer hydrogenation conditions is reported. A significant advantage of this new procedure is that the ruthenium hydrogen transfer catalysts allow high functional group tolerance. Interestingly, both primary and secondary amines were efficiently racemized under these conditions. We also report on the combination of this new amine racemization with an enzymic kinetic resolu. of primary amines.

IT 9001-62-1, Lipase 104439-77-2

RL: CAT (Catalyst use); USES (Uses)

(ruthenium-catalyzed racemization of amines and subsequent lipase-catalyzed kinetic resolu.)

RN 9001-62-1 CAPLUS

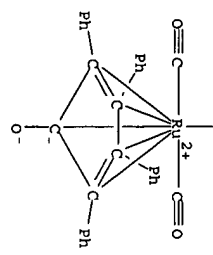
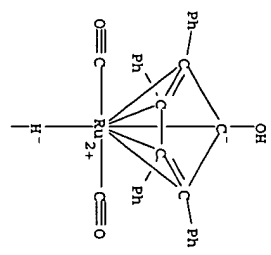
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 104439-77-2 CAPLUS

Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

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REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2002:403138 CAPLUS  
DOCUMENT NUMBER: 137:369562  
TITLE: Efficient ruthenium-catalyzed racemization of secondary alcohols: application to dynamic kinetic resolution

AUTHOR(S): Dijkman, Arne; Elzinga, Geoffrey M.; Li, Yu-Xin; Arends, Isabel W. C. E.; Sheldon, Roger A.  
CORPORATE SOURCE: Department of Biotechnology, Biocatalysis and Organic Chemistry, Delft University of Technology, Delft, 2628 BL, Neth.

SOURCE: Tetrahedron: Asymmetry (2002), 13(8), 879-884  
CODEN: TASYE3; ISSN: 0957-4166  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Three new ruthenium-based catalytic systems are described which are capable of catalyzing the racemization of chiral secondary alcs. In addn., one of these systems, [RuN(CH2)2NH2]RuCl(P-cymene)/TEMPO, was able to catalyze the in situ racemization during enzymic resolu., i.e. dynamic kinetic resolu.

IT 9001-62-1, Novozym 435

RL: NUU (Other use, unclassified); USES (Uses)  
(additive; effect of additives on racemization of secondary alcs. in presence of ruthenium compds./TEMPO catalytic systems)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

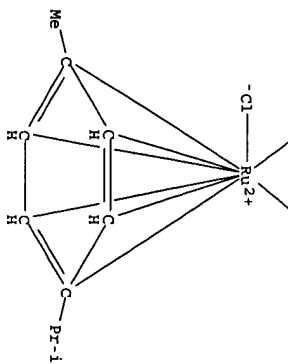
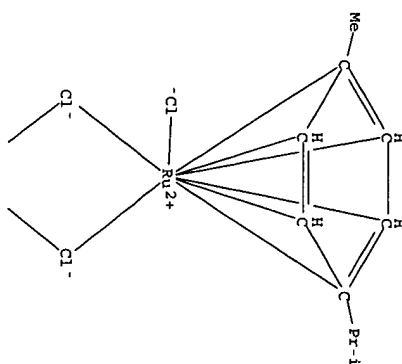
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 52462-29-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
(efficient ruthenium compds./TEMPO catalytic systems for racemization of secondary alcs. and potential applications to dynamic kinetic resolu.)

RN 52462-29-0 CAPLUS

CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



## REFERENCE COUNT:

31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:

DOCUMENT NUMBER:

TITLE:

INVENTOR(S) :

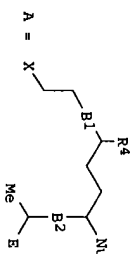
PATENT ASSIGNEE(S) :

SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

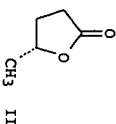
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032844	A2	20020425	WO 2001-EP11992	20011016
WO 2002032844	Cl	20030821		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MY, NZ, NO, NZ, PK, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, RU, TM, RM, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SG, TR, BF, BJ, CF, CG, CI, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10051136	A1	20020418	DE 2000-10051136	20001016
DE 10134172	A1	20030123	DE 2001-10134172	20010713
AU 2002021693	A5	20020429	AU 2002-21693	20011016
EP 1358144	A1	20031105	EP 2001-987736	20011016
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPL. INFO.:				
DE 2000-10051136 A		20001016		
DE 2001-10134172 A		20010713		
WO 2001-EP11992 W		20011016		
OTHER SOURCE(S) :				
CASREACT 136:340534; MARPAT 136:340534				



AB The invention relates to **racemic** and esp. **non-racemic** acyloins,  $R_1C(O)CH_2OH$  (I;  $R_1 = H$ , alkyl (esp. Me, Et, Pr), aryl, alkylaryl, CH<sub>2</sub>-aryl, (CH<sub>2</sub>)<sub>2</sub>-aryl, vinyl, alkynyl, propynyl, allyl, 3,3-dialkylallyl, C3-7-cycloalkyl, CHNF<sub>3</sub>-n, C3-7-oxacycloalkyl;  $R_2 =$  alkyl, aryl, alkylaryl, CH<sub>2</sub>-aryl, (CH<sub>2</sub>)<sub>2</sub>-aryl, vinyl, alkynyl, propynyl, allyl, 3,3-dialkylallyl, E- or Z-haloalkenyl, 3,3-dialkylallyl, C3-7-cycloalkyl, CHNF<sub>3</sub>-n, C3-7-oxacycloalkyl, alkylpropynyl, 1-alkylallyl, 3,3-dialkylallyl, A (joined at X; B1, B2 = single or E-, Z-, E/Z-double bond; B1 = epoxide;  $R_4 = H$ , F, Cl, Br, I, alkyl (esp. Me, Et, CHNF<sub>3</sub>-n), aryl, alkylaryl, CH<sub>2</sub>-aryl, (CH<sub>2</sub>)<sub>2</sub>-aryl, vinyl, alkynyl, propynyl, allyl, 3,3-dialkylallyl, C3-7-cycloalkyl, CHNF<sub>3</sub>-n, C3-7-oxacycloalkyl; E = Me, CH<sub>2</sub>OH, CH<sub>2</sub>O-PG, CH<sub>2</sub>-halo, CONR<sub>2</sub>, CON(PG)<sub>2</sub>, CON(OMe)Me, CN; R = alkyl, NO = R<sub>4</sub>, O-PG, OR, N(PG)<sub>2</sub>, N(alkyl)<sub>2</sub>, S-PG, S-alkyl, Se-PG, Se-alkyl, CN, N<sub>3</sub>, aryl, heteroaryl; PG = protective group), their derivs., a method for the prodn. thereof and the use of the same for producing epothilones and their derivs. The invention esp. relates to the prodn. of acyloins in a non-racemic form by means of enzymic resoln. of racemates. The invention also relates to epothilone synthesis components. The invention also relates to the use of synthesis components for producing epothilones and thereof and the use of synthesis components for producing epothilones and thereof.

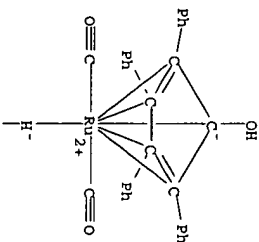
their derivs. Thus, optically active (2)-3-hydroxy-6,10-dimethyl-11-  
 [(tert-butylidimethylsilyl)oxy]undeca-5,9-dien-2-one was prepd. from  
 (+)-1)-(2)-3-acetoxy-6,10-dimethyl-11-[(tert-butylidimethylsilyl)oxy]undeca-  
 5,9-dien-2-one via enzymic resohn. with Chitazyme 16. The  
 optically active hydroxy ketone was converted to three  
 3-O-(tert-butylidimethylsilyl)epochlone D stereoisomers.  
 IT 9001-62-1, Lipase 9016-18-6, Esterase  
 104621-48-9  
 RL: CAR (Catalyst use); USES (Uses)  
 (prepn. of asym. substituted acylolns and derivs. for the of epochlone  
 B, D and their derivs.)  
 CN 9001-62-1 CAPLUS  
 Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 9016-18-6 CAPLUS  
 Esterase, carboxyl (8CI, 9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 104621-48-9 CAPLUS  
 Ruthenium, bis(acetato-.kappa.O.,kappa.O')[(1R)-[1,1'-binaphthalene]-2,2'-  
 diyl]bis[diphenylphosphine-.kappa.P]]-, (OC-6-22-DELTA.)-(9CI) (CA INDEX  
 NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IS ANSWER 10 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:255775 CAPLUS  
 DOCUMENT NUMBER: 137:278899  
 TITLE: Dynamic kinetic resolution of  
 .gamma.-hydroxy acid derivatives  
 Burno, Ann-Britt L.; Parnies, Oscar; Faber, Kurt;  
 Backvall, Jan-E.  
 Arrhenius Laboratory, Department of Organic Chemistry,  
 Stockholm University, Stockholm, SE-10651, Sued.  
 Tetrahedron Letters (2002), 43(16), 2985-2986  
 CODEN: TETLEA; ISSN: 0040-4039  
 Elsevier Science Ltd.  
 Journal  
 English  
 CASREACT 137:278899  
 GI  
 PUBLISHER:  
 DOCUMENT TYPE:  
 LANGUAGE:  
 OTHER SOURCE(S):

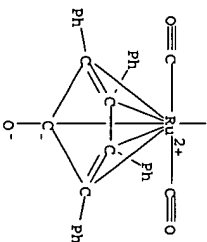


AB .gamma.-Hydroxy acid derivs. MeCH(OR)CH2CH2COR1 [R = H; R1 = Me3CO,  
 (Me3CH)2N] (I) undergo enzymic kinetic resohn. with  
 4-chlorophenyl acetate in toluene in the presence of Pseudomonas cepacia  
 lipase to give nonracemic I (R = Ac) in 44-56% yields and in 77-98% ee.  
 When the enzymic resohn. is performed under anaerobic conditions  
 in the presence of a bis(hydroxycyclopentadienyl)diruthenium tetracarboxyl  
 hydride racemization catalyst and in the presence of  
 2,4-dimethyl-3-pentanol as a hydride donor, nonracemic I (R = Ac) is  
 isolated in 43-93% yields and in 71-98% ee from the dynamic kinetic  
 resohn. MeCH(OAc)CH2CH2CON(CHMe)2, prepd. in 93% yield and 98%  
 ee from the dynamic kinetic resohn. of I [R = H; R1 =

(Me3CH)2N], undergoes hydrolysis with lithium hydroxide in methanol  
 followed by acidic lactonization to give the nonracemic .gamma.-lactone II  
 in 92% ee.  
 IT 9001-62-1, Lipase 104439-77-2  
 RL: CAR (Catalyst use); USES (Uses)  
 (enantioselective prepn. of .gamma.-hydroxy acid derivs. by either  
 kinetic or dynamic kinetic resohn. of .gamma.-hydroxy acid  
 derivs. with Pseudomonas cepacia lipase in absence or presence of  
 ruthenium racemization catalyst)  
 CN 9001-62-1 CAPLUS  
 Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 104439-77-2 CAPLUS  
 Ruthenium, tetracarboxyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]lato-  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



PAGE 1-A



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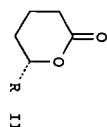
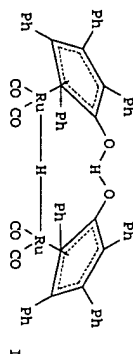


L5 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002.64783 CAPLUS  
 DOCUMENT NUMBER: 136:263059  
 TITLE: Enzymatic kinetic resolution and chemoenzymatic dynamic kinetic resolution of .delta.-hydroxy esters. An efficient route to chiral .delta.-lactones

AUTHOR(S): Pamies, Oscar; Baeckvall, Jan-E.  
 CORPORATE SOURCE: Arrhenius Laboratory, Department of Organic Chemistry, Stockholm University, Stockholm, SE-106 91, Swed.

SOURCE: Journal of Organic Chemistry (2002), 67(4), 1261-1265  
 CODEN: JOCEBH; ISSN: 0022-3263  
 American Chemical Society

PUBLISHER: Journal  
 DOCUMENT TYPE: English  
 LANGUAGE: CASREACT 136:263059  
 OTHER SOURCE(S): GI



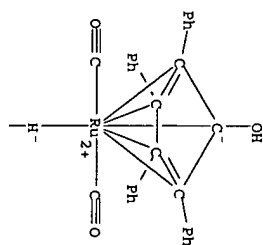
AB Racemic .delta.-hydroxy esters RCH(OH)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>CMe<sub>3</sub> (R = Me, Et) underwent kinetic resolu. by lipase-catalyzed transesterification with 4-chlorophenyl acetate in toluene to give nonracemic .delta.-acetoxy esters (R)-RCH(OAc)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>CMe<sub>3</sub> (R = Me, Et) and the (S)-.delta.-hydroxy esters RCH(OH)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>CMe<sub>3</sub> (R = Et) in 98-99% ee (e value up to 360). When the Shvo ruthenium isomerization catalyst I was added to the enzymic acylation conditions, the combination of the enzymic kinetic resolu. with a ruthenium-catalyzed alc. racemization led to an efficient dynamic kinetic resolu. of the .delta.-hydroxy esters to give (R)-RCH(OAc)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>CMe<sub>3</sub> in 87-89% yields and in ee up to 99%. The .delta.-hydroxy esters were converted to .delta.-lactones II, important building blocks in the synthesis of natural products and biol. active comds., by desacylation with lithium hydroxide in toluene/methanol followed by acidification with hydrochloric acid. (S)-5-(tert-butylidimethylsiloxy)heptanal (S)-EtCH(OTBDMS)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CHO (TBDMS = tert-butylidimethylsilyl), a key intermediate in the synthesis of widely used com. insecticide spinosyn A, was prepd. from (S)-EtCH(OH)CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>CMe<sub>3</sub> by silylation of the secondary alc. followed by reductn. of the ester with diisobutylaluminum hydride.

IT 9001-62-1, Lipase  
 RL: CAT (Catalyst use); USES (Uses)  
 (Pseudomonas cepacia: enantioselective prepn. of .delta.-lactones by dynamic kinetic resolu. of .delta.-hydroxy esters by lipase and acylation with 4-chlorophenyl acetate in presence of lipase and ruthenium isomerization catalyst)  
 RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

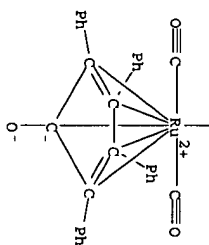
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 IT 104439-77-2  
 RL: CAT (Catalyst use); USES (Uses)  
 (enantioselective prepn. of .delta.-lactones by dynamic kinetic

resolu. of .delta.-hydroxy esters by acylation with 4-chlorophenyl acetate in presence of lipase and ruthenium isomerization catalyst)  
 RN 104439-77-2 CAPLUS  
 CN Ruthenium, tetracarboxyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] di- (9CI) (CA INDEX NAME)

PAGE 1-A

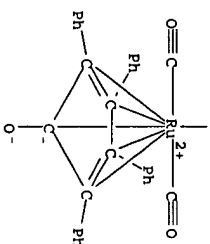
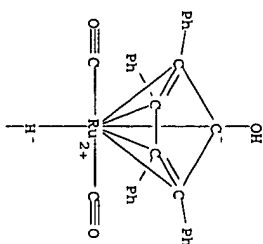


PAGE 2-A



REFERENCE COUNT: 46  
 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 L5 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2001.868714 CAPLUS  
 DOCUMENT NUMBER: 136:4770  
 TITLE: Process for the preparation of enantiomerically enriched esters and alcohols  
 INVENTOR(S): Verzijl, Gerardus Karel Maria; De Vries, Johannes Gerardus; Broxterman, Quintus Bernardus  
 PATENT ASSIGNEE(S): DSM N.V., Neth.





REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

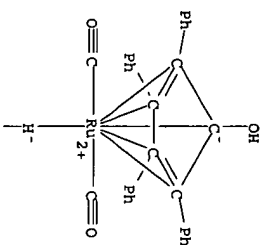
15 ANSWER 13 OF 23  
 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER:  
 2001:669911 CAPLUS  
 DOCUMENT NUMBER:  
 136:37080  
 TITLE:

AUTHOR(S):  
 CORPORATE SOURCE:  
 SOURCE:

PUBLISHER:  
 DOCUMENT TYPE:  
 LANGUAGE:

Efficient lipase-catalyzed kinetic resolution  
 and dynamic kinetic resolution of  
 beta-hydroxy nitriles: A route to useful precursors  
 for gamma-amino alcohols  
 Pamiés, Oscar; Backvall, Jan-E.  
 Department of Organic Chemistry, Arrhenius Laboratory,  
 Stockholm University, Stockholm, 106 91, Swed.  
 Advanced Synthesis & Catalysis (2001), 343(6+7),  
 726-731  
 CODEN: ASCAF7; ISSN: 1615-4150  
 Wiley-VCH Verlag GmbH  
 Journal  
 English

AB An efficient kinetic resoln. of racemic .beta.-hydroxy nitriles was performed via Candida antarctica lipase (N-435)-catalyzed transesterification. A variety of racemic alkyl, aryl, and arylalkenyl substituted .beta.-hydroxy nitriles was efficiently transformed to the corresponding enantiomerically pure acetates (ee >99% and conversion = 50%) with E values from 40 to >1000. The combination of the enzymic kinetic resoln. with a ruthenium-catalyzed alc. racemization led to a dynamic kinetic resoln. (ee's up to 99%, yields up to 85%).  
 IT 9001-62-1. Lipase 104439-77-2  
 RL: CAT (Catalyzer used): USRS (Uses)  
 (lipase-catalyzed kinetic resoln. and dynamic kinetic resoln. of .beta.-hydroxy nitriles)  
 RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 104439-77-2 CAPLUS  
 CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NME)  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NME)



29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

2001:416874 CAPLUS

**Stereoselective method for preparing chiral esters from alkenyl esters via ruthenium catalyzed reduction and enzymic resolution**

Park, Jai wook; Kim, Mahn-joo; Koh, Jeong Hwan; Jung, Hyun Min

Samsung Fine Chemicals Co., Ltd., S. Korea; Pohang University of Science and Technology

PCT Int. Appl., 19 pp  
CODEN: PIXXD2

English  
T: 1

11

KIND	DATE
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DATE \_\_\_\_\_

AL, AM, AT,  
CZ, DE, DK,

IS, IN, IT,

SK, SL, TJ,

AZ, BY, KG,

CE, DS, FN,  
FI, FR, GB,  
CM, GA, GN,

AI, 2002

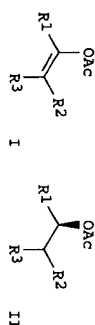
AL 2002  
CH, DE, DK,  
LT, LV, FI.

LI, LV, FL,  
T2 2003

2001  
2002

• •

CASH/REAL



AB A method for prep. optically pure chiral esters I (R1, R2 and R3 =

resoln. is disclosed. For example, it was synthesized in 9% yield (98% enantiomeric excess) by mixing 1-phenylethyl acetate with 2,6-dimethylheptan-4-ol, a ruthenium catalyst, and Novozym 435 followed by heating under Argon with subsequent chromatog. purifn. The chiral esters obtained can be used as synthetic intermediates for preg. Various chiral comds., chiral pharmaceutical drugs (e.g. Atorvastatin and Agenerase) or chiral agrochems. (e.g. L-Carnitine).

IT 5001-62-L, Novozym 435 52462-23-0 104439-77-2

RL: CAT (Catalyst use); USES (Uses)

via ruthenium catalyzed re-

RN	9001-62-1	CAPLUS
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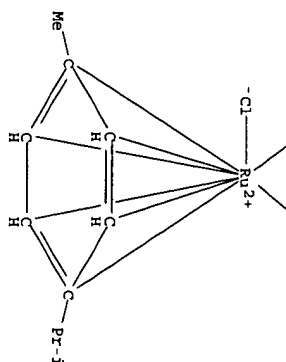
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

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*** STRUCTURE DIAGRAM I
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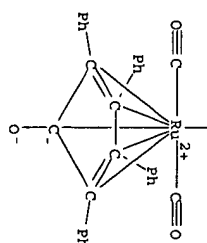
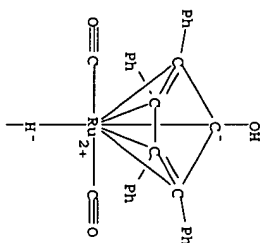
CN Ruthenium, di- $\mu$ -chlorodichlorobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-

CN Ruthenium, di-.mu.-chlorodichloride

CN Ruthenium, di-.mu.-chlorodichloride



RN 104439-77-2 CAPLUS  
 CN Ruthenium, tetracarbonyl- $\mu$ -hydro[(1,2,3,4,5- $\eta$ )-1-hydroxy]ato-  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-ylidene [(1,2,3,4,5- $\eta$ )-1-hydroxy-  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-ylidene] di- (9CI) (CA INDEX NAME)



## REFERENCE COUNT:

6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:412568 CAPLUS

DOCUMENT NUMBER: 135:152357

TITLE:

AUTHOR(S):

CORPORATE SOURCE:

SOURCE:

PUBLISHER:

DOCUMENT TYPE:

LANGUAGE:

OTHER SOURCE(S):

AB The racemic title substrates were modified with bulky protecting groups and then subjected to the lipase/ruthenium-catalyzed dynamic kinetic resolution. (DKR). E.g., DKR of MeCH(OH)CH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>Ph with pseudomonas cepacia lipase, a Ru catalyst, and 4-ClC<sub>6</sub>H<sub>4</sub>OAc gave (R)-MeCH(OAc)CH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>Ph (88% yield, 86% ee).

IT 9001-62-1, lipase PSD 104439-77-2

RL: CAT (Catalyst use); USSS (uses)

(lipase/ruthenium-catalyzed dynamic kinetic resolu. of hydroxy acids, diols, and hydroxy aldehydes protected with a bulky group)

RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

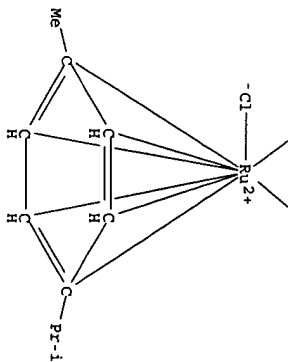
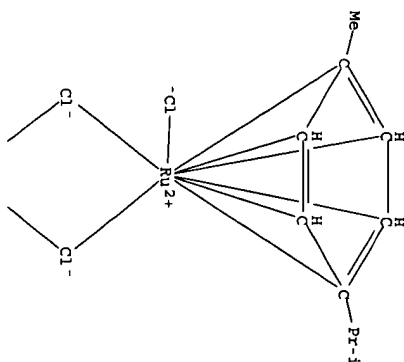
\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*

RN 104439-77-2 CAPLUS  
 CN Ruthenium, tetracarbonyl- $\mu$ -hydro[(1,2,3,4,5- $\eta$ )-1-hydroxy]ato-  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-ylidene [(1,2,3,4,5- $\eta$ )-1-hydroxy-  
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-ylidene] di- (9CI) (CA INDEX NAME)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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$$\begin{array}{c} \text{OCOR}^3 \\ | \\ \text{R}^1 - \text{C} - \text{R}^2 \\ | \\ \text{I} \end{array}$$

AB	Title esters [I, R1-R3 = (cyclo)alkyl, acyl, etc.] were prepd. from R1COR2 in the presence of a Ru complex, a lipase, a hydride donor, and an acyl donor wherein unacylated alkanol enantiomer is racemized
IT	52462-29-0 RU: CAT (Catalyst use); USES (uses) (prepn. of chiral esters) 52462-29-0 CAPUS Ruthenium, di- $\mu$ -chlorodichlorobis[(1,2,3,4,5,6'-eta.)-1-methyl-4-(1-methylethyl)-benzene]- (3CI) (CA INDEX NAME)



IT 9001-62-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of chiral esters)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
REFERENCE COUNT: 6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2001:192974 CAPLUS  
DOCUMENT NUMBER: 134:366391  
TITLE: Enantioselective Synthesis of .beta.-Hydroxy Acid

AUTHOR(S):  
CORPORATE SOURCE:

SOURCE:

PUBLISHER:  
DOCUMENT TYPE:

LANGUAGE:

OTHER SOURCE(S):

AB Combining dynamic kinetic resolu. with an aldol reaction provides access to .beta.-hydroxy ester derivs. with high enantiomeric purity (up to 99% ee) in a one-pot procedure. Only simple starting materials are required in this enantioselective process, and preformation of a silyl enol ether is not necessary.

IT 9001-62-1, Lipase 104439-77-2

RL: CAT (Catalyst use); USES (Uses)

(enantioselective synthesis of .beta.-hydroxy acid derivs. via a one-pot aldol reaction-dynamic kinetic resolu.)

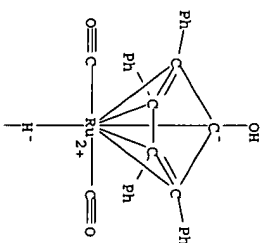
RN 9001-62-1 CAPLUS

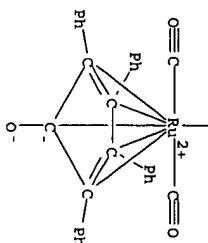
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarbonyl-.mu.-hydro [(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)





## REFERENCE COUNT:

42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:455856 CAPLUS

DOCUMENT NUMBER: 133:222192

TITLE: Dynamic Kinetic Resolution of Allylic Alcohols Mediated by Ruthenium- and Lipase-Based Catalysts

AUTHOR(S) : Lee, Donghyun; Huh, Eun A.; Kim, Mahn-Doo; Jung, Hyun Min; Koh, Jeong Hwan; Park, Jaiwook

CORPORATE SOURCE: Department of Chemistry Division of Molecular and Life Science, Pohang University of Science and Technology, Pohang Kyungbuk, 790-784, S. Korea

SOURCE: Organic Letters (2000) , 2(15) , 2377-2379

CODEN: ORLEF7; ISSN: 1523-7060

American Chemical Society

PUBLISHER: Journal

DOCUMENT TYPE: English

OTHER SOURCE(S) : CASREACT 133:222192

AB An enzyme-metal combo reaction has been developed for the dynamic kinetic resolu. of allylic alcs. in which racemic substrates are transformed by a lipase and a ruthenium complex in the presence of an acyl donor to allylic acetates of high optical purity in over 80% yield.

IT 9001-62-1, Lipase

RL: CAT (Catalyst use); USES (Uses)

(catalyst for enantioselective acylation of racemic allylic alcs.; synthesis of homochiral allylic acetates via enantioselective enzymic acetylation of racemic allylic alcs. and Ru-catalyzed racemization of unreacted substrate)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 52462-29-0, (p-Cymene)ruthenium(II) chloride dimer

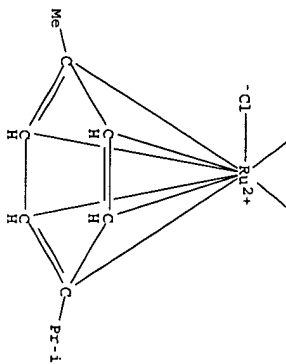
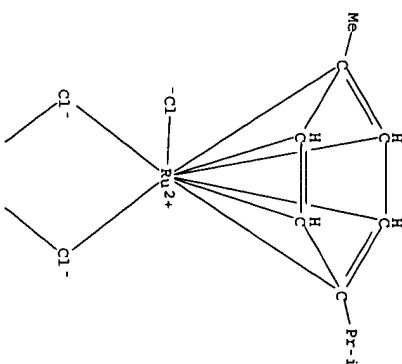
90720-60-8, Ruthenium, .mu.-chlorodichloro-.mu.-hydrobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di-

RL: CAT (Catalyst use); USES (Uses)

(racemization catalyst for dynamic kinetic resolu of allylic alcs.; synthesis of homochiral allylic acetates via enantioselective enzymic acetylation of racemic allylic alcs. and Ru-catalyzed racemization of unreacted substrate)

RN 52462-29-0 CAPLUS

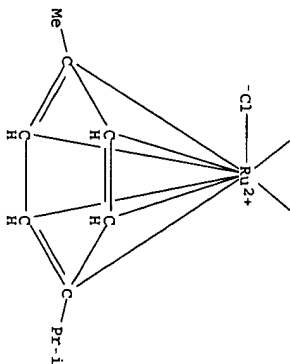
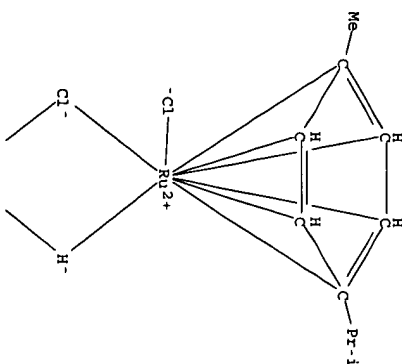
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



RN 90720-60-8 CAPLUS

CN Ruthenium, .mu.-chlorodichloro-.mu.-hydrobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)

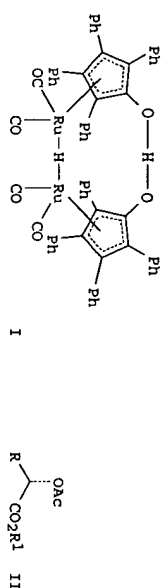




REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

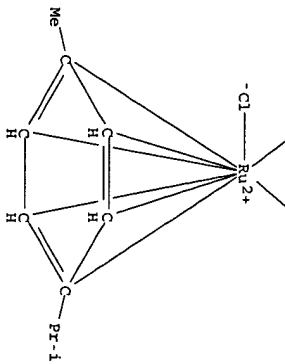
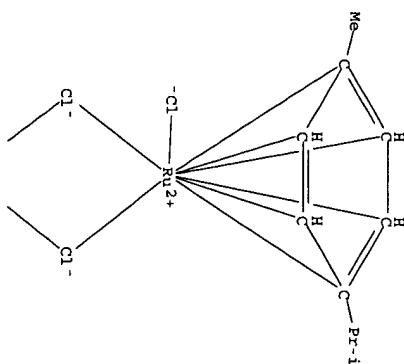
L5 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2000-196518 CAPLUS  
 DOCUMENT NUMBER: 132-333983  
 TITLE: Dynamic Kinetic Resolution of .alpha.-Hydroxy Acid Esters  
 AUTHOR(S): Huerta, Fernando F.; Laxmi, Y. R. Santosh; Baekvall, Jan-E.  
 CORPORATE SOURCE: Department of Organic Chemistry Arrhenius Laboratory, Stockholm University, Stockholm, SE-106 91, Swed.  
 SOURCE: Organic Letters (2000), 2(8), 1037-1040  
 CODEN: ORLE7J; ISSN: 1523-7060

PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 132:333983  
 GI



AB Enzymic *resoln.* of .alpha.-hydroxy esters RCH(OH)CO<sub>2</sub>R<sub>1</sub> (R = Bu, Ph, 4-MeOC<sub>6</sub>H<sub>4</sub>, PhCH<sub>2</sub>CH<sub>2</sub>, 4-BrC<sub>6</sub>H<sub>4</sub>, cyclohexyl); R<sub>1</sub> = Me, Et) in combination with ruthenium-catalyzed *racemization* with the dimeric ruthenium catalyst I led to dynamic *resoln.* of the .alpha.-hydroxy esters to give esters II in good yields and excellent ee's. E.g., Me .alpha.-hydroxy-4-methoxyphenylacetate and 4-chlorophenyl acetate were dissolved in cyclohexane; argon was bubbled through the soln. and the soln. was injected by cannula into a Schlenk flask with 2 mol% catalyst I and 30 mg of *Pseudomonas cepacia* lipase PS-C and heated for 48h and 60 degree. to give acetate II (R = 4-MeOC<sub>6</sub>H<sub>4</sub>; R<sub>1</sub> = Me) in 76% yield and in 94% ee.

IT 9001-62-1, Lipase 52462-29-0  
 RL: CAT (Catalyst use); USRS (Uses)  
 (nonracemic prepn. of .alpha.-hydroxy esters by dynamic *resoln.* in the presence of *Pseudomonas cepacia* lipase and a dimeric ruthenium catalyst)  
 RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 52462-29-0 CAPLUS  
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



IT

104439-77-2P

RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PRBP (Preparation); RACT (Reactant or reagent); USES (Uses)

(nonracemic prepn. of .alpha.-hydroxy esters by dynamic **resoln**

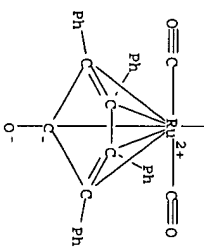
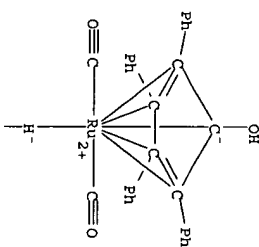
. in the presence of Pseudomonas cepacia lipase and a diruthenium

catalyst)

PN

104439-77-2 CAPUS

Ruthenium, tetracyclopentadienyl-1,2,3,4,5-eta.)-1-hydroxy)ato-2,3,4,5-tetracyclopentadienyl-1-y])[(1,2,3,4,5-eta.)-1-hydroxy-2,3,4,5-tetracyclopentadienyl-1-y])di- (9CI) (CA INDEX NAME)



IT

12321-08-3P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PRBP (Preparation); USES (Uses)

(nonracemic prepn. of .alpha.-hydroxy esters by dynamic **resoln**

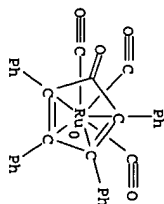
. in the presence of Pseudomonas cepacia lipase and a diruthenium

catalyst)

RN

12321-08-3 CAPUS

Ruthenium, tricyclopentadienyl[(2,3,4,5-eta.)-2,3,4,5-tetraphenyl-2,4-cyclopentadienyl-1-one]- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

17

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:

1999:379055 CAPLUS

DOCUMENT NUMBER:

131:129567

TITLE:

Dynamic Kinetic Resolution of Secondary Diols via Coupled Ruthenium and Enzyme Catalysis

AUTHOR(S) :

Persson, B. Anders; Huerta, Fernando F.; Baekvall, Jan-E.

CORPORATE SOURCE:

Department of Organic Chemistry, Uppsala University, Uppsala, SE-751 21, Swed

SOURCE:

JOURNAL OF ORGANIC CHEMISTRY (1999), 64(14), 5237-5240

PUBLISHER:

AMERICAN CHEMICAL SOCIETY

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S) :

CASREACT 131:129567

AB

Enzymatic acylation of secondary sym. diols (as meso/dl mixts.) in combination with ruthenium-catalyzed isomerization of the diol led to efficient dynamic kinetic resolu. In this way, a meso/dl mixt. of the diol was transformed to enantiomerically pure (R,R)-diacetate, making efficient use of all the diol material. For some of the flexible substrates, substantial amts. of meso-diacetates were formed as side products. The results indicate that the major part of the meso product is formed via an intramol. acyl-transfer pathway.

IT

9001-62-1, Novozym 435 104439-77-2

RU: CAT (catalyst use) ; USES (uses)

(dynamic kinetic resolu. of secondary diols via coupled ruthenium and enzyme catalysis)

RN

9001-62-1 CAPLUS

CN

Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\*

STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

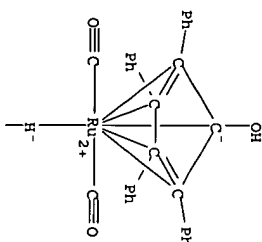
RN

104439-77-2 CAPLUS

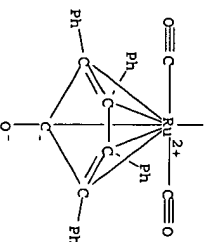
CN

Ruthenium, tetracarboxylate, -mu.-hydro((1,2,3,4,5-eta.)-1-hydroxy)-2,3,4,5-tetracyclopentadien-1-yl]di- (1,2,3,4,5-eta.)-1-hydroxy-2,3,4,5-tetracyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

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REFERENCE COUNT:

29

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 23

CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:

1998:332954 CAPLUS

DOCUMENT NUMBER:

129:95085

TITLE:

Asymmetric Diels-Alder reaction via enzymic kinetic resolution using ethoxycarbonyl methyl fumarate

AUTHOR(S) :

Kita, Yasuyuki; Imanishi, Masaaki; Akai, Shuji; Matsugi, Masato

CORPORATE SOURCE:

Graduate School of Pharmaceutical Sciences, Osaka University, Osaka, 565, Japan

SOURCE:

Chemical Communications (Cambridge) (1998), (11), 1183-1184

PUBLISHER:

ROYAL SOCIETY OF CHEMISTRY

DOCUMENT TYPE:

Journal

LANGUAGE:

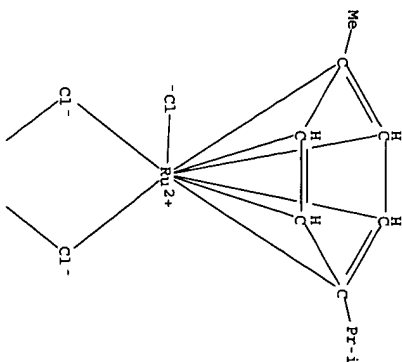
English

AB

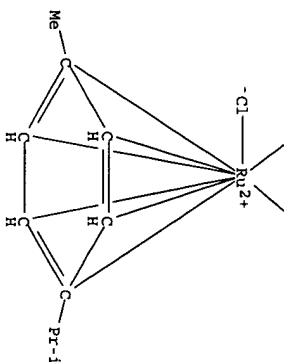
A domino-type asym. [4+2] cycloaddn. reaction following TOYORO LIP

enzymic kinetic **resoln.** using ethoxyvinyl Me fumarate is described.  
 IT 9001-62-1, Lipase 52462-29-0  
 RU: CAT (Catalyst use); USES (Uses)  
 (asym. Diels-Alder reaction via enzymic kinetic **resoln.** using ethoxyvinyl Me fumarate)  
 RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 52462-29-0 CAPLUS  
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6- $\eta$ )-(1-methyl-4-(1-methylethyl)benzene)di-(9CI) (CA INDEX NAME)

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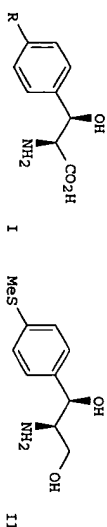
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1998:16459 CAPLUS  
 DOCUMENT NUMBER: 128:23109  
 TITLE: Synthesis of 4-Sulfur-Substituted (2S,3R)-3-Phenylserines by Enzymic Resolution.  
 Enantiopure Precursors for Thiaphenicol and Flofenicol  
 Kapelein, Bernard; van Dooren, The J. G. M.; Boesten, Wilhelmus H. J.; Sonke, Theo; Duchateau, Alexander L. J.; Brokterman, Quirinus B.; Kamphuis, Johan  
 Organic Chemistry Biotechnology Section Fine Chemicals, DSM Research, Geleen, 6160 MD, Neth.  
 Organic Process Research & Development (1998), 2(1), 10-17  
 CODEN: OPRDFK; ISSN: 1083-6160  
 American Chemical Society  
 Journal  
 English  
 CASREACT 128:23109

CORPORATE SOURCE:  
 SOURCE:

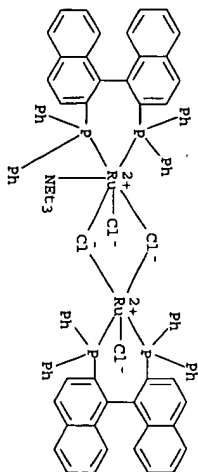
AUTHOR(S):

PUBLISHER:  
 DOCUMENT TYPE:  
 LANGUAGE:  
 OTHER SOURCE(S):  
 GI



AB Enantiomerically pure 4-methylthio- and 4-methylsulfonyl-substituted (2S,3R)-3-phenylserines I (R = MeS, MeSO2) are prepd. by enzymic **resoln.** of the corresponding racemic threo amides using the amidase from Ochrobactrum anihropi NCIMB 40321. The unwanted (2R,3S)-amide enantiomers are sepd. from the enantiopure amino acids and easily **racemized** after Schiff base formation with the corresponding 4-(methylthio)- and 4-(methylsulfonyl)benzaldehyde. The **racemization** can be combined with the prepn. of the **racemic** amides by aldol reaction under crysln. conditions to yield only the threo isomers. Enantiopure phenylserines I (R = MeS, MeSO2) are thus obtained in 78% and 62% overall yields starting from the corresponding substituted benzaldehydes. I (R = MeS) is reduced to diol II with NaBH4/H2SO4 and can be used for the synthesis of thiaphenicol and flofenicol.

IT 9001-62-1, Lipase 109361-17-3  
 RU: CAT (Catalyst use); USES (Uses)  
 (asym. synthesis of sulfur-substituted phenylserines by enzymic **resoln.** of racemic amides and **racemization** of unwanted stereoisomers)  
 RN 9001-62-1 CAPLUS  
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 RN 109361-17-3 CAPLUS  
 CN Ruthenium, bis[(1R)-[1,1'-binaphthalene]-2,2'-diylbis[di(phenylphosphine)-kappa-P]]di-.mu.-chlorodichloro(N,N-diethylethanamine)di-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1997:407237 CAPLUS  
 DOCUMENT NUMBER: 127:135610  
 TITLE: Enzymic resolution of alcohols coupled with ruthenium-catalyzed racemization of the substrate alcohol

AUTHOR(S): Larsson, Anna L. E.; Persson, B. Anders; Backvall, Jan-E.

CORPORATE SOURCE: Department Organic Chemistry, Uppsala University, Uppsala, S-75121, Sweden.

SOURCE: Angewandte Chemie, International Edition in English (1997), 36(11), 1211-1212

CODEN: ACTEAY; ISSN: 0570-0833

WILEY-VCH

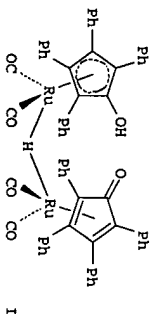
Journal

English

CASREACT 127:135610

OTHER SOURCE(S):

GI



I

AB The ruthenium-catalyzed racemization of (+)-(R)-alpha-methylbenzenemethanol was coupled with an enzyme-catalyzed transesterification to give the resolved alc. deriv. Thus, the combination of catalyst I, 4-chlorophenyl acetate and Novozym 435 in the reaction of (+)-(R)-alpha-methylbenzenemethanol gave (R)-alpha-methylbenzenemethanol acetate in high yield and high enantiomeric purity

IT 9001-62-1, Novozym 435 104439-77-2

RL: CAT (Catalyst use); USES (Uses)  
 (ruthenium-catalyzed racemization and sequential enzymic resolu. of alcs.)

RN 9001-62-1 CAPLUS

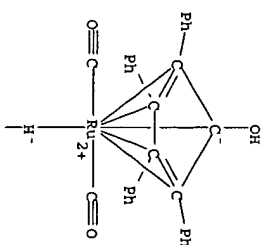
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

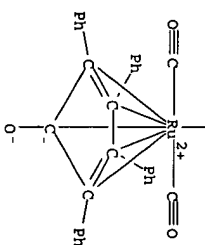
RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarbonyl-mu-hydro(1,2,3,4,5-eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

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REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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